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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,165	02/09/2006	Dario Toncelli	SAIC2235510078800110	7808
26304 7590 08/10/2009 KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			EXAMINER ARYAN-NEJAD, ROSHANAK	
			ART UNIT 1791	PAPER NUMBER
			MAIL DATE 08/10/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/568,165

Applicant(s)

TONCELLI, DARIO

Examiner

ROSHANAK ARYAN-NEJAD

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 06 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
- Paper No(s)/Mail Date 2/9/06
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Detailed Action

Claim Rejections- 35 USC §112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language "or other expanded inorganic material" in the last part of claim 3 is not clear what is included or excluded in this claim. Also, the language "such as alumina" in the last part of claim 3 is not clear if the alumina is an exemplary or part of the claimed invention.

Claim Rejections- 35 USC §103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 4, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toncelli (WO 01/45921) in view of Potkanowicz (US 3,560,290) and in further view of Schock et al. (US 6,177,179)

The prior art, Fig. 1 illustrates a plant used to manufacture slabs by means through vibratory compaction under vacuum conditions. (page 8, lines 29-30)

Regarding Claim 1 steps a, b, and e, the prior art in Toncelli teaches the following:

Regarding **Claim 1, step (a)**, the prior art of Toncelli discloses preparation of a mix comprising of a hardening resin and a granular material and quartzes or quartzites, considered to meet the filler material instantly claimed, intended to form the visible side of the final slab article on Page 10 (Lines 1-25).

Regarding **Claim 1 steps (b) and (e)**, the prior art of Toncelli, in the discussion of the plant on Page 9 indented under (2) discloses a second station B wherein a film forming agent is sprayed onto the underlying rubber sheet 20. This is the separating or releasing material that is applied to the rubber sheets. See also step (5) with fifth station D.

Regarding **Claim 1 step (f)**, The prior art in Toncelli, on Page 9 indented under (6) discloses a sixth station for vibratory compaction under vacuum where the mixture

comprised between the two rubber sheets is submitted to a compressive force and to a vibratory action under vacuum conditions.

Regarding **Claim 1 step (g)**, The prior art in Toncelli, on Page 9 indented under (7) discloses a seventh catalysis station where the catalysis reaction giving the finished produce takes place.

Regarding **Claim 1 step (h)**, The prior art of Toncelli, on page 9, Line 10 discloses a mixture 26 and on Page 10, Lines (5-6) discloses that the mixture 26 consists of inorganic materials in a powder form, it further teaches on Page 9, Lines 19-20 that this material could be quartz or quartzites (i.e., fillers). The prior art of Toncelli does not teach a web of continuous glass filaments being pre-impregnated with one of the first hardening resin and a compatible resin.

Regarding **Claim 1 step (C)**, Potkanowicz teaches a method and apparatus for combining a viscous resin and reinforcing glass fiber strands. He also teaches that the thermo-setting resin is cured immediately after combination with the glass fiber in the form and shape of building panel, and that the impregnation of the glass fiber strands with the resin is readily effected. (Column 1, Lines 10-40) It is necessary to work the composite sheet further to insure complete coating and impregnation of the strands with the resin (i.e. make sure they are compatible). (Column 3, Lines 1-4)

It would have been obvious to a person with an ordinary skill in the art at the time the invention was made to impregnate the layers of the prior art of Toncelli as taught by Potkanowicz. The motivation for doing so is that this would provide an economic

process for producing an inexpensive raw material for the manufacture of the reinforced resinous articles. (Potkanowicz, Column 3, Lines 30-32)

Further, the prior art of Toncelli does not teach the second granular material being a light weight granular material, the one of the same hardening resin used in the mix and a compatible resin being present in the second mix with a volumetric percentage substantially equal to volumetric percentage of the hardening resin in the first mix.

Regarding **Claim 1 step (d)**, Schock teaches a process to produce an integral board-like component comprising a visible side and a rear side. It is suggested that the filler content of the first filler in the visible side layer be 50 to 90% by volume, that the rear side comprise a layer which is formed from a polymer matrix filled with a second inorganic filler wherein the proportion of the polymer matrix in this layer in % by volume differs quantitatively by 20% at the most from the volume content of the polymer matrix in the visible side layer.

It would have been obvious to a person with an ordinary skill in the art at the time the invention was made to use the volume percentage as taught by Schock in the process of the prior art of Toncelli. The motivation for doing so is that this would ensure that the layers can be produced in a relatively simple manner with very good planarity but also that the planarity of the layer is maintained during changes in temperature with differences in temperature of 100 degrees C. (Schock, Column 2, Lines 45-55)

Regarding **Claim 4**, Toncelli on Page 10 Lines (25-27) discloses a hardening resin is preferably an epoxy resin or polyester resin.

Regarding **Claims 6 and 7**, Toncelli on Page 10, Lines (19-23), discloses a granular material present in said first layer of a stony and/or calcareous and/or siliceous type being quartzes, or quartzites, granites, glass, metals, shells, ceramics of all kinds, minerals of various kind.

5. Claims 2 and 3 are rejected under U.S.C. 103 (a) as being unpatentable over Toncelli (WO 01/45921) in view of Rosendahl (DE 3043869).

Regarding Claims 2 and 3, Toncelli on Page 13 Lines (7-21), teaches that the addition of inorganic material to the mixture having a grain size of 1.2 mm which falls within the claimed range. Toncelli on Page 10 Lines (1-6), also discloses the method comprising the step of adding inorganic materials in granular form with the option of adding an inorganic material.

Toncelli does not teach an expanded inorganic material.

Rosendahl, (in the Abstract), teaches using expanded clay for the production of slabs of lightweight material in order to prevent subsequent disintegration.

Based on these teachings, it would have been obvious to one having ordinary skill in the art to modify the method of Toncelli to include the use of expanded clay of Rosendahl in order to reinforce the slab of Toncelli and thus prevent disintegration.

6. Claim 5 is rejected under U.S.C. 103 (a) as being unpatentable over Toncelli (WO 01/45921) in view of Peccenini et al. (US 4,268,574).

Regarding Claim 5, Toncelli discloses on page 10 Lines (25-27) that said hardening resin is preferably an epoxy resin or a polyester resin.

Toncelli does not teach adding an organofunctional silane to the polyester resin. Peccenini et al. teaches the addition of organofunctional silane to polyester resin for the purpose of improving bond strength in the manufacture of layered structures. (Col. 2, Lines 5-9)

Based on these teachings, it would have been obvious to one having ordinary skill in the art to add the organofunctional silane to the hardening resin, i.e., epoxy resin or polyester resin as a coupling agent in order to improve bonding between layers. (Peccennini, Col. 4, Lines 66-68)

7. Claim 8 is rejected under U.S.C. 103 (a) as being unpatentable over Toncelli (WO 01/45921) in view of Bellasalma et al. (US 4,959,401).

Regarding Claim 8, Toncelli discloses on page 10 Lines (19-23), a filler is chosen from quartz.

Toncelli does not teach using quartz in the form of cristobalite. Bellasalma et al. (column 3, Lines 31-35) teaches using silicon dioxide (i.e., cristobalite) as a high temperature melting binder which also provides clarity in the finished product. Based on these teachings, it would have been obvious to one having ordinary skill in the art to choose the quartz in the form of powdered cristobalite in order to enhance the clarity of the finished product. (Bellasalma, Col. 3, Lines 35-37)

Response to Applicant's Arguments

Applicant's arguments with respect to claim 1 parts c and d and claim 2 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROSHANAK ARYAN-NEJAD whose telephone number is (571)270-7665. The examiner can normally be reached on M-F, 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Roshanak Aryan-Nejad/
Examiner AU 1791

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Supervisory Patent Examiner, Art Unit 1791